ABSTRACT

An electrolyte for a photovoltaic device including (i) a layered clay mineral and/or an organically modified layered clay mineral and (ii) an ionic liquid as well as a photovoltaic device including a photoelectrode including a transparent conducting layer and a metal oxide semiconductor mesoporous film using, as an electrolyte layer, the same, a counter electrode facing this photoelectrode and an electrolyte layer arranged between the photoelectrode and the counter electrode as well as a dye-sensitized solar cell composed of a photovoltaic device and a photosensitizer carried on a metal oxide semiconductor mesoporous film of the photovoltaic device, wherein the conductive substrate is obtained by coating, on a conductive substrate, a conductive polyaniline dispersion stably dispersed in an organic solvent including (A) a polyaniline obtained by polymerization of aniline or an aniline derivative, (B) a sulfonic acid compound and/or (C) an organic polymer having a protonic acid group, (D) a molecular weight modifier, and (E) an organic solvent capable of dissolving the sulfonic acid compound (B), the organic polymer having a protonic acid group (C), and the molecular weight modifier (D).